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Are you *sure* about that? Thought Confidence and Romantic Conflict Interactions

Undergraduate Research Thesis

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Abstract

The thoughts that romantic partners generate during relationship conflict can greatly influence their attitudes towards their relationship and their emotional experiences (Baucom, Epstein, Sayers, & Sher, 1989; Bradbury & Fincham, 1987). According to the self-validation hypothesis, however, a person's thoughts may be more impactful on their subsequent judgements, attitudes, and feelings when the individual is confident in these thoughts (Briñol & Petty, 2009). The present studies aimed to determine whether thought confidence moderates the relationship between thought valence (i.e., the positivity or negativity of the thought) and relationship and personal outcomes. Participants in Study 1 ($N = 294$) recalled a past conflict discussion in their relationship and listed the thoughts they had during the interaction. Results showed that thought confidence moderated the relationship between thought valence and perceived relationship quality, but not between thought valence and positive or negative affect. Participants in Study 2 ($N = 201$) thought of a current top source of conflict in their relationship and imagined having a conflict discussion with their partner about the issue. Results showed that as confidence in negative thoughts increases, negative affect also increases, and intimacy and relationship satisfaction decrease. In Study 3 ($N = 101$), participants were randomly assigned to write down the negative thoughts they had during their imaginary conflict discussion with either their dominant or non-dominant hand, in order to manipulate thought confidence. Participants writing with their dominant hand experienced higher levels of negative affect and lower levels of positive affect compared to those writing with their non-dominant hand. The thought confidence manipulation was not strong enough to produce any differences in perceived relationship quality. Overall, the findings of the three studies suggest that thought confidence may help explain when

an individual's thoughts influence their relationship and personal outcomes, providing insight into how couples can more adaptively navigate the task of engaging in conflict interactions.

Are you *sure* about that? Thought Confidence and Romantic Conflict Interactions

Relationships with others are arguably the most significant factor in shaping one's lifestyle. Whether it be a dating relationship or a long-term marriage, these interactions have immense effects on a partner's well-being. The quality of a relationship can develop profound, lasting influences on an individual, considered as a key factor in determining the state of one's mental health (Braithwaite, Delevi, & Fincham, 2010; Berry & Worthington, 2001; Simon & Barrett, 2010).

When examining romantic relationships, it is crucial to consider relationship conflict. Even the most satisfied couples will report enduring conflict and disappointment in the relationship (McNulty & Karney, 2001). Researchers emphasize that the majority of relationship distress results from failing to effectively respond to such conflict (Koerner & Jacobson, 1994). When conflict is left unaddressed or is handled inappropriately, negative feelings may begin to build up, creating deleterious patterns of relationship interactions, eventually even harming the positive aspects of the relationship as well (Karney & Bradbury, 1995). Clearly, effectively coping with relationship conflict experiences is crucial for couples if they hope to maintain a satisfying relationship over time.

From a social psychological perspective, cognitions in relationship conflict situations are incredibly meaningful because they greatly shape and reflect the behaviors of an individual (Fincham & Bradbury, 1987). Indeed, researchers agree that cognitions during relationship conflict have the potential to illustrate regularities in how partners interact with one another (Baldwin, 1995; Baucom, Epstein, Sayers, & Sher, 1989; Fincham, 2003). For example, much of past literature has focused on attributions, in which partners assign a cause to their conflict. When a person views their partner's negative behaviors as a result of global, stable

characteristics of their partner, this attribution frequently leads to a reciprocation of negative behavior, escalating the conflict. When a person views their partner's positive behaviors as a result of global, stable characteristics of their partner, this attribution maximizes the impact of positive behavior and can therefore enhance the quality of the relationship (Holtzworth-Munroe & Jacobson, 1985).

Not only do cognitions during relationship conflict reflect how partners will interact with each other, but they are also associated with subsequent attitudes towards the relationship. For instance, maintaining unrealistic assumptions and standards about one's partner (e.g., "You should be able to read my mind") during conflict is associated with increased relationship distress (Baucom, Epstein, Sayers, & Sher, 1989). Additionally, cognitions during relationship conflict can influence each partner on an individual level by impacting their emotions. For example, some individuals may perceive their partner's negative behaviors during a conflict as intentional and negatively motivated, making the behaviors seem highly relevant to the self. Since these cognitions are considered self-relevant, they are processed more fully by the individual, leading to increased experiences of negative affect (Bradbury & Fincham, 1987).

Although a great deal of research has examined the impact of cognitions during relationship conflict, previous research has mainly focused on primary, first-order thoughts. Our research expands upon this literature by delving into second-order thoughts, or thoughts about our own cognitions and thought processes, referred to as metacognition (Petty, Briñol, & DeMarree, 2007). According to the self-validation hypothesis (Briñol & Petty, 2009; Petty, Briñol, & Tormala, 2002; Briñol, Petty, & Tormala, 2004), first-order thoughts may lack substantial impact on subsequent judgments, feelings, and behaviors, unless there is confidence in such thoughts (i.e., metacognition). In past literature, the self-validation hypothesis has been

examined in the context of attitudes and persuasion. Researchers discovered that thought confidence moderated the relationship between thoughts and attitude change. In other words, when participants had high thought confidence, the valence of their thoughts was more strongly associated with attitude change. Participants' attitudes depended less on thought valence when they had low confidence in their thoughts. When an individual had positive thoughts towards a persuasive message, increased thought confidence was associated with increased persuasion. When an individual had negative thoughts towards a persuasive message, increased thought confidence was associated with reduced persuasion (Petty, Briñol, & Tormala, 2002). These results made it clear that thought confidence may play an integral role in the formation of attitudes towards persuasive arguments.

Additional empirical studies provide support for the self-validation hypothesis, revealing that it can be applied to other attitude domains besides persuasion, including attitudes about oneself (i.e., self-esteem). For example, participants were assigned to write down either their best or worst qualities with their dominant or non-dominant hand. Participants who wrote their thoughts with their non-dominant hand were expected to experience decreased thought confidence, since writing with one's non-dominant hand is difficult to control and can appear "shaky", while those writing with their dominant hand were expected to experience increased thought confidence (Briñol & Petty, 2009). The results confirmed these expectations, indicating that people writing positive thoughts about themselves with their dominant hand experienced increased self-esteem compared to those writing with their non-dominant hand. Additionally, people writing negative thoughts about themselves with their dominant hand experienced decreased self-esteem compared to those writing with their non-dominant hand (Briñol & Petty, 2003).

Past research confirms the ability to generalize the self-validation hypothesis to other domains. In fact, researchers suggest that the impact of thought confidence can be applied to whatever mental contents are currently available and salient (Briñol & Petty, 2009). Thus, if the self-validation hypothesis can help explain the influence of a person's thoughts on their attitudes towards a persuasive message or their attitudes towards themselves, it may also provide an explanation for when a person's thoughts during relationship conflict influence their attitudes towards their relationship and their emotions.

I suggest that thought confidence may play a role in the association between a person's thoughts during relationship conflict and their subsequent attitudes towards their relationship. For instance, during a conflict discussion, a person may think "My partner is insensitive" and have high confidence in their thought. Due to their high thought confidence, the person's negative thought valence may more strongly predict decreased relationship satisfaction. If the person is doubtful in their thought, however, thought valence may not be as strongly associated with the person's relationship satisfaction. Similarly, I suggest that thought confidence can also help clarify the relationship between a person's thoughts during relationship conflict and their emotional experience. If a person thinks "My partner doesn't trust me" and is confident in this thought, their negative thought valence may more strongly predict increased negative affect. Conversely, there would not be as strong of a relationship between thought valence and negative affect if the person was doubtful in this thought.

The current research aims to determine if thought confidence has an influence on peoples' attitudes towards their relationship (i.e., perceived relationship quality) and their emotions (i.e., positive and negative affect) after engaging in a conflict discussion with their partner. I hypothesize that thought confidence will moderate the relationship between thought

valence and relationship and personal outcomes. Specifically, as thought confidence increases, thought valence will be more predictive of relationship and personal outcomes.

Study 1

Study 1 aimed to investigate the impact of thought confidence in the context of cognitions during relationship conflict. I examined whether thought confidence moderates the relationship between thought valence and relationship and personal outcomes in a cross-sectional sample of individuals. I hypothesized that thought valence will be more strongly associated with relationship and personal outcomes to the extent that thought confidence is high rather than low. When a person has positive thoughts during relationship conflict, I predict that increased thought confidence will be positively associated with beneficial relationship and personal outcomes. When a person has negative thoughts during relationship conflict, I predict that increased thought confidence will be negatively associated with beneficial relationship and personal outcomes.

Method

Participants. Two hundred ninety-four Introductory Psychology students at a large Midwestern university completed a set of questionnaires in a single setting in partial fulfillment of a course requirement. Sixty-five percent of participants were female, and participants ranged in age from 18 to 37 years old (M = 19.2 years, SD = 2.5). The sample was 65.6% Caucasian/White, 22.4% Asian, 11.6% African American/Black, less than 1% American Indian or Alaska Native, 1.4% native Hawaiian or other Pacific Islander, and 6.5% “Other.” In addition, ten percent of participants were Hispanic/Latino(a).

Measures and Procedure. Participants were asked to recall a past conflict discussion they have had with their relationship partner and to list the thoughts they had during the conflict discussion, no matter if they were positive or negative. Participants could list up to ten thoughts

(*M* = 5). After they finished listing their thoughts, participants completed measures of thought confidence and thought valence for each thought. Next, participants completed measures of perceived relationship quality, positive and negative affect, and demographic information. Additional measures not germane to the current study were included.

Thought confidence was assessed with a measure adapted from Petty, Briñol, and Tormala (2002). Items began with the phrase "Answer the following questions regarding how you felt about this thought during the discussion/fight". 5 items were used for each thought, including "How confident were you in this thought?", "How certain were you in this thought?", "How valid was this thought when it entered your mind?", "How convincing was this thought when it entered your mind?", and "How clear was this thought when it entered your mind?" The items were rated on a 7-point Likert-type scale (1 = "*not at all",* 7 = "*extremely"*) and had excellent internal reliability (α = .96), which was calculated using all of the items for the ten thoughts. The thought confidence variable was also created by combining all of the items for the ten thoughts.

Thought valence was assessed with a single item for each thought, "Overall, how do you evaluate your thought?" The item was rated on a 7-point Likert-type scale (-3 = "*extremely negative",* +3 = "*extremely positive"*). To calculate the thought valence variable, I first created one variable measuring the proportion of positive thoughts listed and one variable measuring the proportion of negative thoughts listed. The proportion of negative thoughts was subtracted from the proportion of positive thoughts, creating the thought valence variable. Thus, higher scores on thought valence represent participants who listed a greater proportion of positive thoughts relative to negative thoughts. Lower scores on thought valence represent participants who listed a greater proportion of negative thoughts relative to positive thoughts. For example, a score of 1

indicates that the participant listed all positive thoughts, and a score of -1 indicates that the participant listed all negative thoughts.

Perceived relationship quality was assessed with a measure from Fletcher, Simpson, and Thomas (2000). Items began with the phrase "The following questions ask about your feelings after the discussion/fight you recalled. Please rate your partner and your relationship on each item. After your discussion/fight…". Five subscales of perceived relationship quality were created, with three items in each subscale. The relationship satisfaction subscale included "How satisfied were you with your relationship with your partner?", "How content were you with your relationship with your partner?", and "How happy were you with your relationship with your partner?" The relationship commitment subscale included "How committed were you to your relationship with your partner?", "How dedicated were you to your relationship with your partner?", and "How devoted were you to your relationship with your partner?" The intimacy subscale included "How intimate was your relationship with your partner?", "How close was your relationship with your partner?", and "How connected were you to your partner?" The trust subscale included "How much did you trust your partner?", "How much could you count on your partner?", and "How dependable was your partner?" The love subscale included "How much did you love your partner?", "How much did you adore your partner?", and "How much did you cherish your partner?" All 15 items were used in the overall perceived relationship quality measure. The items were rated on a 7-point Likert-type scale (1 = "*not at all",* 7 = "*Extremely"*). The overall perceived relationship quality measure had excellent internal reliability ($\alpha = .95$), as well as the relationship satisfaction ($\alpha = .95$), relationship commitment ($\alpha = .96$), intimacy ($\alpha = .87$), trust ($\alpha = .90$), and love ($\alpha = .87$) subscales.

Positive and negative affect was assessed with the Scale of Positive and Negative Experience (Diener et al., 2009). Items began with the phrase "After the discussion/fight, thinking about my relationship with my partner, I felt...". 6 items were used to measure positive affect, including "Positive," "Good," "Pleasant," "Happy," "Joyful," and "Contented". 6 items were used to measure negative affect, including "Negative," "Bad," "Unpleasant," "Afraid," "Irritable," and "Hostile". The items were rated on a 7-point Likert-Type scale (1 = "*not at all",* 7 = "*extremely"*) and had excellent internal reliability for both positive ($\alpha = .95$) and negative ($\alpha = .91$) affect.

Results and Discussion

Table 1 shows the means, standard deviations, and zero-order correlations for all Study 1 variables. The results of such analyses revealed participants who had a higher proportion of positively valenced thoughts (indicated by higher scores on thought valence) reported significantly increased perceived relationship quality ($r = .16$, $p = .008$). Positive thought valence was also significantly associated with increased relationship satisfaction ($r = .22$, $p < .001$), intimacy ($r = .15$, $p = .011$), and trust ($r = .22$, $p < .001$). There were no significant associations between positive thought valence and relationship commitment ($r = .03$, $p > .250$) or between positive thought valence and love ($r = -.01$, $p > .250$). There were significant associations between positive thought valence and increased positive affect ($r = .26$, $p < .001$) and between positive thought valence and decreased negative affect ($r = -.27$, $p < .001$). These results replicated past findings involving thought valence in the context of romantic relationships. Past research similarly indicated that positively valenced thoughts can increase feelings of intimacy, warmth, and relationship stability (Brenner & Vogel, 2015).

The results shown in Table 1 also revealed that participants who were more confident in their thoughts reported significantly increased perceived relationship quality ($r = .21$, $p < .001$). Increased thought confidence was also significantly associated with increased relationship satisfaction ($r = .17$, $p = .003$), relationship commitment ($r = .21$, $p < .001$), intimacy ($r = .15$, $p = .012$), trust ($r = .13$, $p = .032$) and love ($r = .19$, $p = .001$). There were no significant associations between thought confidence and positive affect ($r = .09$, $p = .150$) or between thought confidence and negative affect ($r = -.06$, $p > .250$).

I also tested whether thought confidence moderates the relationship between thought valence and relationship and personal outcomes using Model 1 in PROCESS. Consistent with my hypothesis, thought confidence moderated the association between thought valence and perceived relationship quality ($b = .31$, 95% CI = [.06, .55], $\beta = .16$, $p = .014$; see Figure 1), such that the association between thought valence and perceived relationship quality was significant for participants higher in thought confidence (1 *SD* above the mean; $b = .45$, 95% CI = [.22, .69], $\beta = .39$, $p < .001$), but not for participants lower in thought confidence (1 *SD* below the mean; $b = .04$, 95% CI = [-.16, .23], $\beta = .03$, $p > .250$). Thought confidence also moderated the association between thought valence and several of the perceived relationship quality subscales, including intimacy and love[1]. Thought confidence did not moderate the association between thought valence and negative affect ($b = -.20$, 95% CI = [.-.53, .14], $\beta = -.08$, $p = .247$; see Figure 2) or the relationship between thought valence and positive affect ($b = .25$, 95% CI = [-.13, .63], $\beta = .08$, $p = .203$; see Figure 3). However, the results were in the predicted direction,

Table 1.

Means, Standard Deviations, and Zero-Order Correlations for All Variables in Study 1

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	M(SD)
1. Thought Confidence	--										5.55(.98)
2. Thought Valence	.20**	--									-.16(.61)
3. Perceived Relationship Quality	.21***	.16**	--								5.72(1.15)
4. Relationship Satisfaction	.17**	.22***	.84***	--							5.30(1.57)
5. Relationship Commitment	.21***	.03	.82***	.66***	--						5.91(1.43)
6. Intimacy	.15*	.15*	.85***	.61***	.60***	--					5.67(1.35)
7. Trust	.13*	.22***	.82***	.62***	.52***	.64***	--				5.67(1.48)
8. Love	.19**	-.01	.80***	.52***	.60***	.66***	.57***	--			6.07(1.14)
9. Positive Affect	.09	.26***	.49***	.58***	.32***	.36***	.43***	.27***	--		4.13(1.76)
10. Negative Affect	-.06	-.27***	-.49***	-.57***	-.33***	-.35***	-.44***	-.27***	-.71***	--	3.07(1.55)

Note. $N = 294$.

*$p < .05$. **$p < .01$. ***$p < .001$.

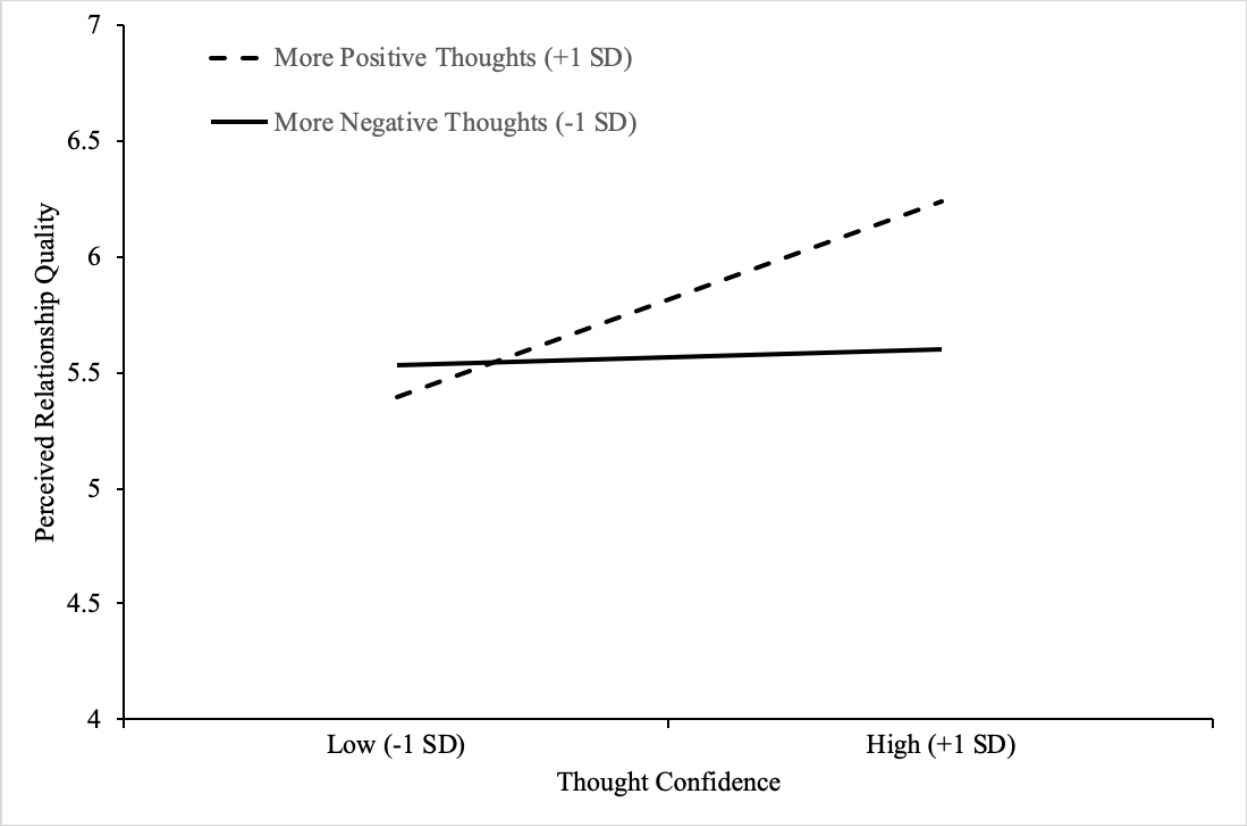

Figure 1. Thought confidence as a moderator of the relationship between thought valence and perceived relationship quality in Study 1. Predicted values are plotted at 1 *SD* above and 1 *SD* below the mean for thought confidence and thought valence. "More positive thoughts" refers to participants who listed a majority of positive thoughts. "More negative thoughts" refers to participants who listed a majority of negative thoughts.

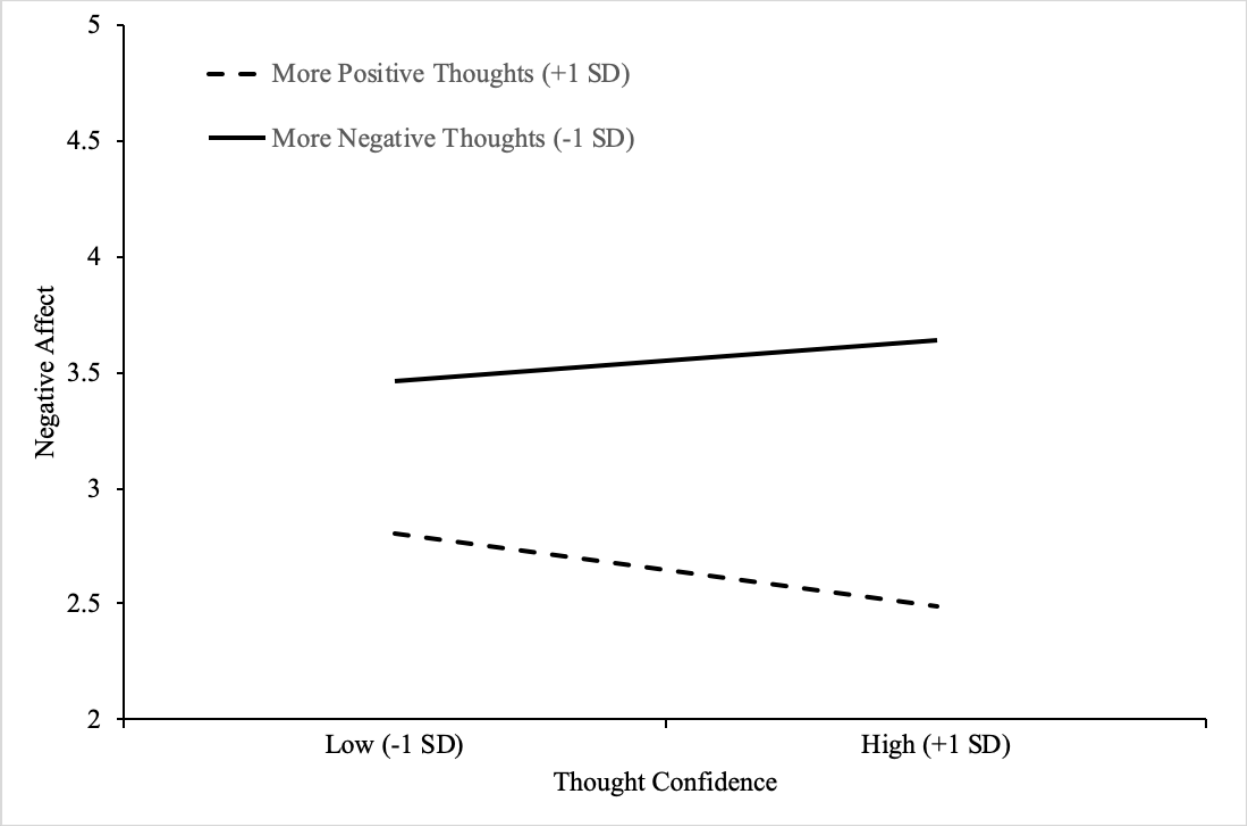

Figure 2. Thought valence predicting negative affect at higher and lower levels of thought confidence in Study 1. Predicted values are plotted at 1 *SD* above and 1 *SD* below the mean for thought confidence and thought valence.

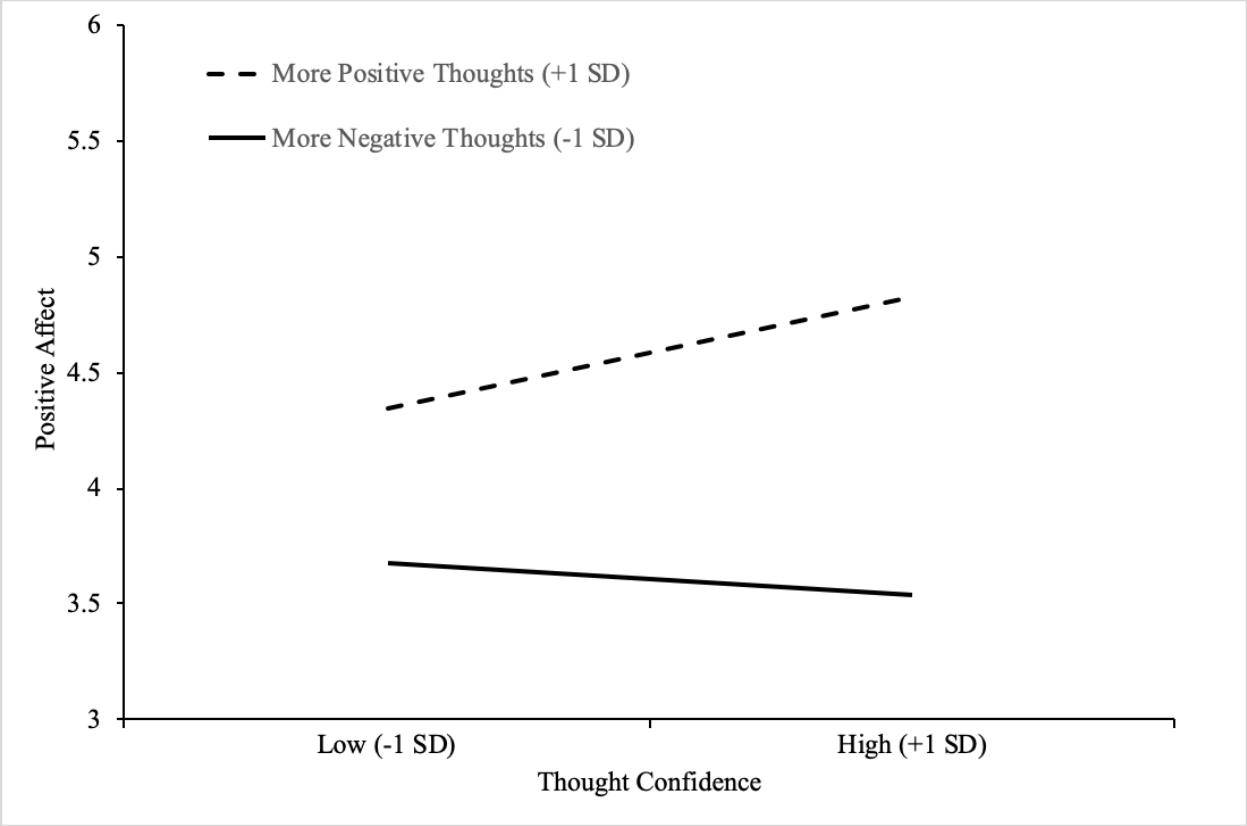

Figure 3. Thought valence predicting positive affect at higher and lower levels of thought confidence in Study 1. Predicted values are plotted at 1 *SD* above and 1 *SD* below the mean for thought confidence and thought valence.

with thought valence having a slightly larger effect on both positive and negative affect when confidence was high relative to when confidence was low.

As shown in Figure 1, the results indicate that as confidence in positive thoughts increases, perceived relationship quality also increases, consistent with my prediction. On the other hand, also shown in Figure 1, the results do not indicate any associations between increased confidence in negative thoughts and decreased perceived relationship quality. This result is surprising, since past research supports a clear association between negative cognitions and decreased relationship quality (Bradbury & Fincham, 1993; Bradbury, Fincham, & Beach, 2000; Masarik et. al, 2013). Thus, the results may not actually indicate that there is no association between increased negative thought confidence and decreased perceived relationship quality, but rather suggest potential issues with the procedure used in Study 1 that may have made it difficult to see this association.

In Study 1, participants were asked to recall a past conflict discussion with their partner, as well as the thoughts they remember having during the discussion. This may have posed an issue in participants' reports of thought confidence and thought valence, since research shows that couples' reports tend to be unreliable when recalling past conflict interactions (Rusbult et. al, 2000). Specifically, couples inflate positive perceptions of their relationship in order to buffer themselves from negativity (Agnew, Loving, & Drigotas, 2001). This relates to the idea of rosy retrospection, in which individuals recall events more fondly compared to their evaluation of the event when it actually occurred (Mitchell, Thompson, Peterson, & Cronk, 1997). The results of Study 1 showed that participants reported very high levels of perceived relationship quality (M = 5.72), indicating that they were highly satisfied with their relationship. Their high relationship satisfaction may have motivated them to engage in this memory bias, in order for their

recollections of their relationship to be more consistent with their current positive attitudes towards their relationship. The potential issue with memory bias may have made it more difficult to see the expected association between confidence in negative thoughts and perceived relationship quality, thus calling for the conflict discussion procedure to be amended in Study 2 and Study 3.

Study 2

The findings in Study 1 were partially consistent with my hypothesis. Thought confidence moderated the association between thought valence and perceived relationship quality but did not moderate the association between thought valence and positive or negative affect. There was also no association between increased confidence in negative thoughts and decreased perceived relationship quality, potentially due to an issue with memory bias when recalling conflict interactions. Study 2 aimed to determine whether there is in fact an association between increased confidence in negative thoughts and a reduction in beneficial relationship and personal outcomes. In Study 2, participants were asked to imagine a new conflict discussion with their romantic partner, rather than to recall a past conflict discussion, in order to avoid any potential issues with memory bias. Study 2 also solely focused on negative thoughts, rather than both positive and negative thoughts, to take a closer look at the relationship between confidence in negative thoughts and relationship and personal outcomes.

Method

Participants. Two hundred and one individuals recruited from Amazon Mechanical Turk completed a set of questionnaires in a single setting on their own computers. Fifty-eight percent of participants were female, and participants ranged in age from 21 to 76 years old (M = 41 years, SD = 12.7). The sample was 83.6% Caucasian/White, 8% Asian, 6.5% African American/Black, 1.5% American Indian or Alaska Native, 2.5% "Other", and there were no native Hawaiian or other Pacific Islanders. Additionally, six percent of participants were Hispanic/Latino(a).

Measures and Procedure. Participants completed an online survey on their personal computers where they were asked to describe a current top source of conflict in their relationship and then imagine having a conflict discussion with their partner regarding the issue. They were then asked to list the three most negative thoughts they had during the conflict discussion. Participants then completed measures of thought confidence, thought valence, perceived relationship quality, positive and negative affect, as well as demographic information. Additional measures not germane to the current study were included.

Thought confidence was assessed for each thought using the same measure employed in Study 1 but was worded in the present tense. The measure had excellent internal reliability (α = .94), which was calculated using all of the items for the ten thoughts. The thought confidence variable was also created by combining all of the items for the ten thoughts. Since participants only listed negative thoughts, higher scores on thought confidence represented increased confidence in negative thoughts, and lower scores represented less confidence in negative thoughts.

Thought valence was assessed for each thought using the single item measuring general thought valence employed in Study 1, but the scale was recoded so higher scores on thought valence would represent more negatively valenced thoughts, and lower scores would represent less negatively valenced thoughts. Thought valence had fair internal reliability ($\alpha = .62$)[2], which was calculated using each item for all three thoughts. The thought valence variable was also calculated by combining each item for all three thoughts.

Perceived relationship quality was assessed using the same measure employed in Study 1 but was worded in the present tense. The overall perceived relationship quality measure had excellent internal reliability ($\alpha = .97$), as well as the relationship satisfaction ($\alpha = .98$), relationship commitment ($\alpha = .96$), intimacy ($\alpha = .92$), trust ($\alpha = .95$), and love ($\alpha = .93$) subscales.

Positive and Negative Affect was assessed using the same measure employed in Study 1 but was worded in the present tense. The measure had excellent internal reliability for both positive ($\alpha = .97$) and negative ($\alpha = .95$) affect.

Results and Discussion

Table 2 shows the means, standard deviations, and zero-order correlations for all Study 2 variables. The results of such analyses revealed that there was no significant association between increased negative thought confidence and decreased perceived relationship quality ($r = -.10$, $p = .166$), but results were trending in the predicted direction. The results also showed that participants who were more confident in their negative thoughts reported significantly lower levels of relationship satisfaction ($r = -.17$, $p = .016$) and marginally significantly lower levels of intimacy ($r = -.13$, $p = .077$), consistent with our hypothesis. There was no significant association between increased negative thought confidence and decreased relationship commitment ($r = -.01$,

$p > .250$), trust ($r = -.07$, $p > .250$), or love ($r = -.04$, $p > .250$), but all results were in the predicted direction. Additionally, there was no significant association between increased negative thought confidence and decreased positive affect ($r = -.07$, $p > .250$), but results were in the predicted direction. Finally, participants who were more confident in their negative thoughts reported significantly increased negative affect ($r = .19$, $p = .007$), consistent with my hypothesis.

These results align more closely with past research on the impact of negative thoughts, indicating that having participants imagine a conflict discussion with their partner may be a more accurate method for eliciting participants' thoughts, compared to recalling a past conflict discussion. I also tested whether thought confidence moderated the relationship between thought valence and perceived relationship quality using Model 1 in PROCESS. Thought confidence did not moderate the relationship between thought valence and perceived relationship quality ($b = -.10$, 95% CI = [-.26, .06], $\beta = -.11$, $p = .220$; see Figure 4). Because participants only listed negative thoughts in Study 2, there was much less variance in thought valence compared to Study 1, so it is not surprising that the moderation did not reach significance. Still, the results are in the predicted direction and align with the findings from Study 1, since there is a slightly larger effect of thought valence on perceived relationship quality when thought confidence is high relative to when confidence is low.

Table 2.

Means, Standard Deviations, and Zero-Order Correlations for All Variables in Study 2

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	M(SD)
1. Thought Confidence	--										5.54(1.16)
2. Thought Valence	.07	--									5.47(1.13)
3. Perceived Relationship Quality	-.10	-.20**	--								5.83(1.22)
4. Relationship Satisfaction	-.17*	-.25***	.91***	--							5.36(1.53)
5. Relationship Commitment	-.01	-.11	.88***	.70***	--						6.24(1.20)
6. Intimacy	-.13	-.18*	.90***	.83***	.72***	--					5.63(1.40)
7. Trust	-.07	-.21**	.87***	.74***	.71***	.70***	--				5.87(1.36)
8. Love	-.04	-.12	.90***	.75***	.84***	.73***	.74***	--			6.04(1.34)
9. Positive Affect	-.07	-.21**	.46***	.54***	.35***	.42***	.34***	.40***	--		4.13(1.77)
10. Negative Affect	.19**	.19**	-.49***	-.55***	-.40***	-.43***	-.40***	-.38***	-.67***	--	2.30(1.45)

Note. $N = 201$. All scales were rated on scales from 1 to 7.

*$p < .05$. **$p < .01$. ***$p < .001$.

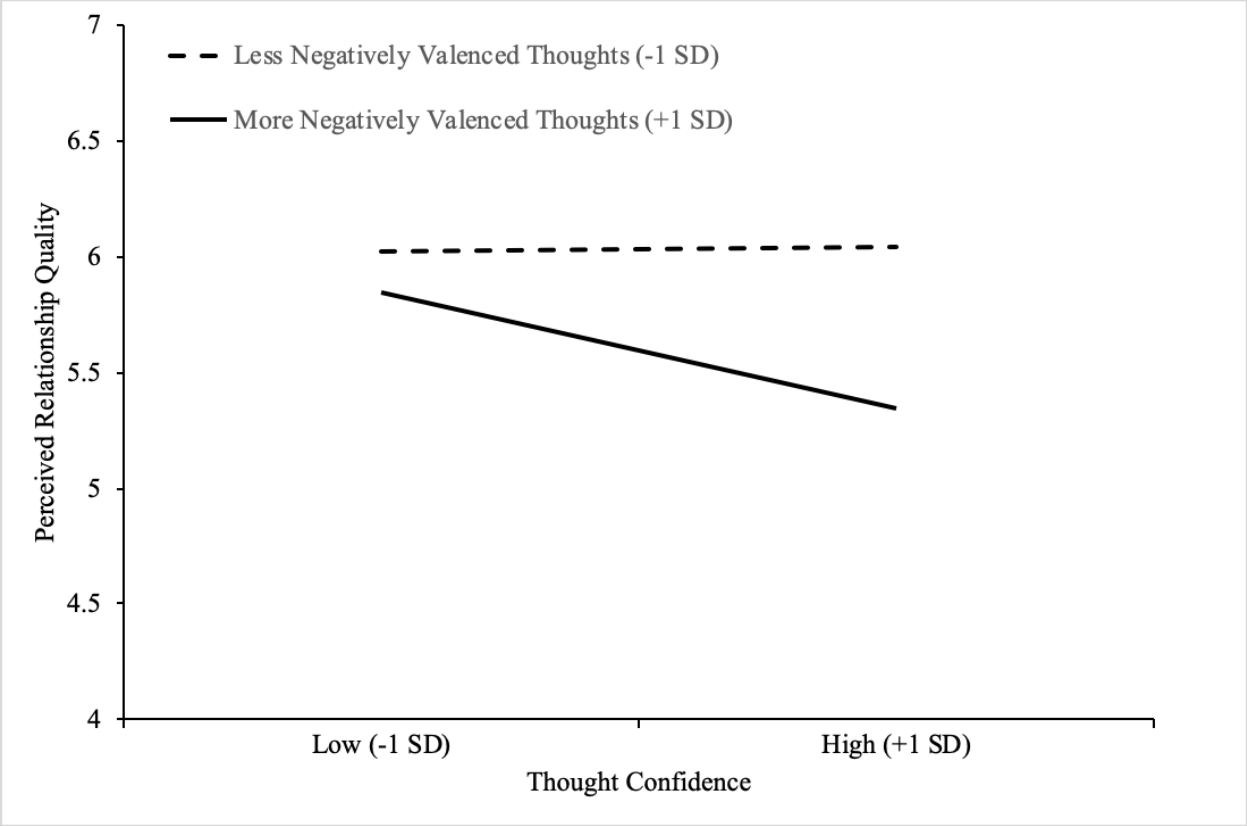

Figure 4. Thought valence predicting perceived relationship quality at higher and lower levels of thought confidence in Study 2. Predicted values are plotted at 1 *SD* above and 1 *SD* below the mean for thought confidence and thought valence.

Study 3

Study 3 aimed to conceptually replicate the results from Study 1 and Study 2 in an experimental context. I sought to establish a causal relationship between thought confidence and relationship and personal outcomes by manipulating each participant's level of thought confidence. Participants were randomly assigned to write down the thoughts they had about their imaginary conflict discussion with either their dominant or non-dominant hand, since the hand a person writes with can influence their amount of confidence in the thoughts they list. Specifically, those who write with their dominant hand will be more confident in their thoughts relative to those who write with their non-dominant hand (Briñol & Petty, 2003; Gao, Wheeler, & Shiv, 2009). I predicted that those who write down their negative thoughts with their dominant hand will be more confident in their thoughts, leading them to perceive their relationship more negatively and experience increased negative affect relative to those who write down their negative thoughts with their non-dominant hand.

Method

Participants. One hundred and eleven Introductory Psychology students at a large Midwestern university completed a set of questionnaires in a single setting in partial fulfillment of a course requirement. Two participants were excluded for reporting that they wrote with the incorrect hand (relative to the hand they were assigned to write with) when asked "Which hand did you use to write down your thoughts?" Eight participants were excluded for informing the research assistant that they accidentally began writing their thoughts with their dominant hand even though they were assigned to write with their non-dominant hand. This left one hundred and one participants in analyses. Sixty one percent of participants were female, and participants ranged in age from 18 to 50 years old (M = 20 years, SD = 4.5). The sample was 67.3%

Caucasian/White, 15.8% Asian, 7.9% African American/Black, 5.9% "Other", there were no American Indian or Alaska Natives, and there were no native Hawaiian or other Pacific Islanders. Five percent of participants were Hispanic/Latino(a).

Measures and Procedure. In the laboratory session, participants were first asked to describe a current top source of conflict in their relationship and then imagine having a conflict discussion with their partner regarding the issue. Similar to cover stories used in past research (e.g., Briñol & Petty, 2003), participants were induced to think that the experiment was designed to test the validity of graphology in predicting relationship longevity, in order to provide a reasonable explanation for why they were asked to write down their thoughts. Participants were randomly assigned to write down the three most negative thoughts they had during the conflict discussion with either their dominant or non-dominant hand. Participants then completed measures of thought confidence, thought valence, perceived relationship quality, and positive and negative affect, as well as demographic information. Additional measures not germane to the current study were included.

Thought confidence was assessed using the same measure employed in Study 1 but was worded in the present tense. The measure had excellent internal reliability ($\alpha = .97$), which was calculated using all of the items for the ten thoughts. The thought confidence variable was also created by combining all of the items for the ten thoughts. Similar to Study 2, participants only listed negative thoughts, so higher scores on thought confidence represented increased confidence in negative thoughts, and lower scores represented less confidence in negative thoughts.

Thought valence was assessed using the single item measuring general thought valence employed in Study 1, but the scale was recoded so higher scores on thought valence represented

more negatively valenced thoughts, and lower scores represented less negatively valenced thoughts. Thought valence had fair internal reliability ($\alpha = .69$)[3], which was calculated using each item for all three thoughts. The thought valence variable was also calculated by combining each item for all three thoughts.

Perceived relationship quality was assessed using the same measure from Study 1 but was worded in the present tense. The overall perceived relationship quality measure had excellent internal reliability ($\alpha = .95$), as well as the relationship satisfaction ($\alpha = .93$), commitment ($\alpha = .90$), trust ($\alpha = .89$), and love ($\alpha = .90$) subscales. Intimacy had good internal reliability ($\alpha = .85$).

Positive and Negative Affect was assessed using the same measure employed in Study 1 but was worded in the present tense. The measure had excellent internal reliability for both positive ($\alpha = .93$) and negative ($\alpha = .92$) affect.

Results and Discussion

First, I conducted an independent-samples t-test to examine whether the handwriting manipulation produced a difference in thought confidence between the two conditions. The results show that participants in the dominant handwriting condition did not differ significantly in reported thought confidence ($M = 4.85$, $SD = 1.58$) relative to participants in the non-dominant handwriting condition ($M = 4.65$, $SD = 1.51$), $t(99) = .67$, $p > .250$). Therefore, the handwriting conditions were a weak manipulation of thought confidence. However, the results were in the expected direction, with participants in the dominant handwriting condition reporting slightly higher levels of thought confidence compared to participants in the non-dominant handwriting condition.

I then conducted an independent-samples t-test to examine whether thought confidence had a causal influence on relationship and personal outcomes. There was no significant difference in perceived relationship quality between conditions, but results were also in the expected direction, with participants in the dominant handwriting condition reporting slightly lower levels of perceived relationship quality compared to participants in the non-dominant handwriting condition[4].

On the other hand, participants in the dominant handwriting condition did report feeling significantly lower levels of positive affect (M = 4.42, SD = 1.64) relative to participants in the non-dominant handwriting condition (M = 5.09, SD = 1.39), $t(99) = -2.20$, $p = .030$), consistent with my predictions. Participants in the dominant handwriting condition also reported feeling marginally significantly higher levels of negative affect (M = 2.22, SD = 1.22) relative to participants in the non-dominant handwriting condition (M = 1.82, SD = 1.12), $t(99) = 1.74$, $p = .084$). Thus, while the manipulation of thought confidence was weak, the handwriting conditions may have still had an effect on participants' emotional experiences.

I also tested whether the thought confidence manipulation moderated the relationship between thought valence and perceived relationship quality using Model 1 in PROCESS. Thought confidence did not moderate the relationship between thought valence and perceived relationship quality ($b = .01$, 95% CI = [-.31, .33], $\beta = .01$, $p > .250$; see Figure 5). Because there was no significant difference in reported levels of thought confidence between handwriting conditions, it is not surprising that there was also no significant difference in the association between thought valence and perceived relationship quality when people wrote their thoughts with their dominant hand versus their non-dominant hand.

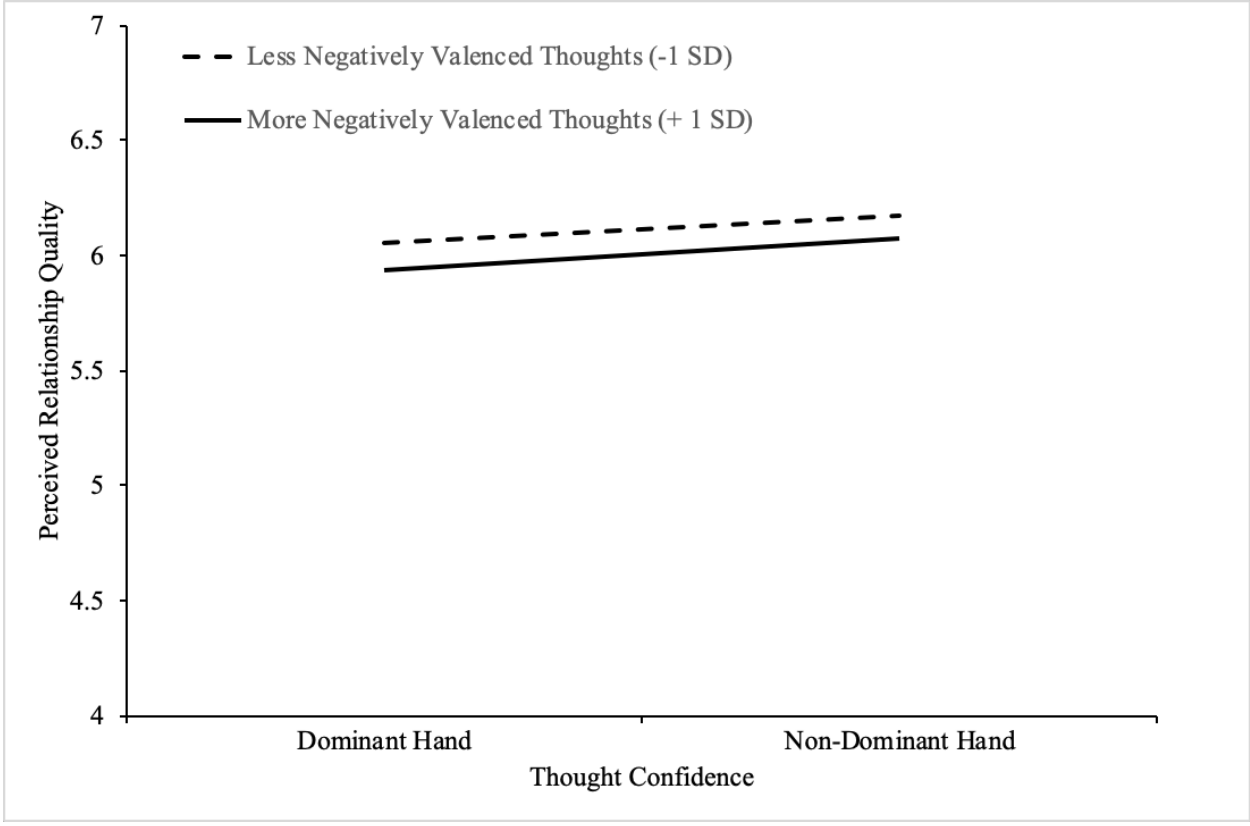

Figure 5. Thought valence predicting perceived relationship quality at higher and lower levels of thought confidence in Study 3. Predicted values are plotted at 1 *SD* above and 1 *SD* below the mean for thought valence.

General Discussion

The self-validation hypothesis suggests that thought confidence moderates the relationship between thought valence and attitude formation, such that an individual's attitudes depend more on the valence of their thoughts when they are confident in these cognitions (Briñol & Petty, 2003; Petty, Briñol, & Tormala, 2002). The current research aimed to apply this theory to relationship conflict in order to better understand how thoughts can influence a person's relationship quality and emotional experiences. I hypothesized that thought confidence would moderate the relationship between thought valence and relationship and personal outcomes. As confidence in positive thoughts increased, I expected that beneficial relationship and personal outcomes would also increase. As confidence in negative thoughts increased, I expected that beneficial relationship and personal outcomes would decrease.

Overall, the results were partially consistent with my hypothesis. Study 1 indicated that thought confidence moderates the relationship between thought valence and perceived relationship quality, such that there was a significant association between thought valence and perceived relationship quality when confidence was high, but no significant relationship when thought confidence was low. This was consistent with my hypothesis and with past research, indicating that participants relied more on their thoughts in determining their perceived relationship quality when they were confident in these thoughts. Also, as predicted, increased thought confidence in positive thoughts was associated with increased perceived relationship quality. However, there was no association between increased confidence in negative thoughts and decreased perceived relationship quality, which was unexpected. This may be due to an issue with the design of Study 1, since asking participants to recall a past conflict may have led to issues with memory bias. Finally, also contrasting with my hypothesis, thought confidence did

not moderate the association between thought valence and positive or negative affect. As shown in Figures 2 and 3, thought valence had more of an effect on positive and negative affect compared to thought confidence. However, the results were still in the predicted direction, with thought valence having a slightly larger effect on both positive and negative affect when thought confidence was high rather than low. It is clear that the results of Study 1 indicate that thought confidence may help explain when the association between thought valence and perceived relationship quality occurs.

Study 2 focused specifically on negative thoughts in order to examine if there is indeed an association between increased confidence in negative thoughts and decreased perceived relationship quality and personal outcomes. Rather than asking participants to recall a past conflict interaction with their romantic partner, Study 2 asked participants to imagine a conflict discussion, in order to eliminate the potential effects of memory bias seen in Study 1. The results of Study 2 were consistent with my hypothesis, indicating that increased confidence in negative thoughts was significantly associated with decreased relationship satisfaction and increased negative affect. Thought confidence in negative thoughts was also marginally associated with decreased levels of intimacy. Because Study 2 asked participants to only list negative thoughts, it is difficult to see a moderating effect of thought confidence on the association between thought valence and relationship and personal outcomes. The moderation was indeed not significant, but the results were in the expected direction, with a slightly larger association between thought valence and perceived relationship quality when confidence was high rather than low. The results of Study 2 indicated that confidence in negative thoughts is associated with a reduction in beneficial relationship and personal outcomes, suggesting that the procedure in Study 2 was a

more accurate method for eliciting participants' thoughts, compared to the procedure implemented in Study 1.

Study 3 examined whether there was a causal relationship between thought confidence and relationship and personal outcomes. Thought confidence was manipulated by randomly assigning participants to write their negative thoughts with either their dominant or non-dominant hand. The results indicated that this manipulation was not strong enough to produce significant differences in relationship outcomes between conditions. However, individuals in the dominant handwriting condition reported significantly lower levels of positive affect relative to individuals in the non-dominant handwriting condition, consistent with my prediction. Additionally, there was a marginally significant difference in negative affect between conditions, with individuals writing with their dominant hand reporting slightly higher levels of negative affect relative to individuals in the non-dominant handwriting condition, consistent with my prediction. The results of Study 3 suggest that thought confidence may have a causal influence on personal outcomes. Future research will be needed to create a stronger manipulation of thought confidence and to examine whether thought confidence has a causal influence on relationship outcomes.

Implications

The present studies extend past research on the self-validation hypothesis to the context of romantic relationships. Consistent with past findings, the current research supports the idea that thought confidence may play a role in the impact of one's thoughts on their subsequent judgements, attitudes, and feelings. Specifically, the results of the present studies indicate that thought confidence may help explain when the association between thoughts during romantic conflict and relationship and personal outcomes occurs. Additionally, the current research

extends the literature on romantic relationships. Past research on romantic relationships indicates a clear relationship between an individual's thoughts during romantic conflict and their attitudes towards their relationship as well as their emotional experiences. The present studies provide a potential explanation for when this relationship occurs, suggesting that the association between a person's thoughts and their relationship and personal outcomes is stronger when they are confident in these thoughts.

The current research also showcases practical implications for how individuals can improve the outcomes of their romantic conflict interactions. Specifically, simply adapting the level of confidence a person feels in their positive and negative thoughts during conflict may help them perceive their relationship in a more positive light, as well as help them experience more positive emotions. Future research could assess whether attempting to increase the confidence a person feels in their positive thoughts is associated with increased perceived relationship quality and positive affect. Similarly, future research could also assess whether attempting to decrease the confidence a person feels in their negative thoughts is associated with increased perceived relationship quality and positive affect. Additionally, the results of the present studies can provide insight into other relationships in which conflict interactions occur, such as employer/employee relationships or negotiation parties. The present findings may imply that thought confidence is a useful tool that individuals can implement to improve their relationships and emotional experiences.

Limitations

There are several limitations associated with the current research. One limitation involves how participants were asked to only list their negative thoughts in Study 2 and Study 3. In Study 2, I wanted to focus on negative thoughts in order to examine the association between negative

thought confidence and relationship and personal outcomes. However, because participants only listed negative thoughts, this made it difficult to obtain a moderating effect of thought confidence on the association between thought valence and relationship and personal outcomes. Additionally, time constraints involved with completing the final study limited the number of individuals who could participate in Study 3. Thus, Study 3 also focused solely on negative thoughts, since assigning participants to list positive or negative thoughts would have added another level to the experiment, requiring more participants than we would have been able to recruit in the appropriate time frame. Because of this, Study 2 was not able to illustrate a significant moderation and Study 3 does not possess any implications for the influence of confidence in positive thoughts on relationship and personal outcomes.

Another limitation of the current research lies in the manipulation of thought confidence. The results of Study 3 indicate that the handwriting manipulation may not have been strong enough to significantly impact a person's relationship outcomes. One potential issue with the manipulation is associated with the cover story, in which participants were told that the experiment examined how graphology can predict relationship longevity. This may have placed pressure on participants, causing them to worry about how their handwriting might indicate the future demise of their relationship, possibly leading them to answer questions differently. Another potential issue with this manipulation involves how many college students use their laptops to write down their thoughts compared to writing down their notes by hand (Fried, 2006). Because students infrequently write their notes by hand, the students who participated in Study 3 may have not been as strongly impacted by the handwriting conditions.

The limitations suggest areas of improvement for future studies, guiding the direction of ongoing research. Although Study 2 used a more accurate method for eliciting participants'

thoughts, it only asked individuals to list negative thoughts. Because of this, future studies should assign participants to either list only the positive thoughts they had during their imaginary conflict discussion or only the negative thoughts they had during their imaginary conflict discussion. This will better examine whether thought confidence moderates the relationship between personal and relationship outcomes while also preventing the possible issue with memory bias that was associated with the design of Study 1. Additionally, issues with the manipulation of thought confidence in Study 3 call for future research focusing on developing a more effective manipulation. In the past, researchers have also utilized vertical versus horizontal head movements, smiling versus frowning, and upright versus slouched body posture to manipulate thought confidence (Briñol & Petty, 2003; Briñol, Petty, & Wagner, 2009). Future research could examine the effectiveness of these approaches in impacting one's thought confidence in the context of romantic conflict interactions and therefore assess whether thought confidence does have a causal effect on relationship and personal outcomes. It is also imperative that future research manipulating thought confidence assigns participants to either list all positive or all negative thoughts, in order to understand how both positive thought confidence and negative thought confidence impacts relationship and personal outcomes.

Conclusions

Thought confidence can help clarify the relationship between cognitions and relationship and personal outcomes during romantic conflict. When a person is confident in their thought, they may depend more on their thought in determining their attitudes towards their relationship compared to when they feel doubtful about their thought. Thus, during romantic conflict discussions, individuals may want to consider the confidence they feel in their thoughts in order to more productively interact with their partner.

Footnotes

1. Thought confidence moderated the association between thought valence and intimacy (b = .43, 95% CI = [.15, .72], β = .19, p = .003), such that the association between thought valence and intimacy was significant for participants higher in thought confidence (1 *SD* above the mean; b = .51, 95% CI = [.23, .79], β = .37, p < .001), but not for participants lower in thought confidence (1 *SD* below the mean; b = -.08, 95% CI = [-.31, .15], β = -.06, p > .250).

   Thought confidence also moderated the association between thought valence and love (b = .37, 95% CI = [.13, .61], β = .19, p = .003), such that the association between thought valence and love was significant for participants higher in thought confidence (1 *SD* above the mean; b = .53, 95% CI = [.29, .76], β = .45, p < .001), but not for participants lower in thought confidence (1 *SD* below the mean; b = .03, 95% CI = [-.17, .22], β = .02, p > .250).
2. Thought valence may have been a less reliable measure due to that fact that participants were asked to list their three *most* negative thoughts. Participants may have only had one extremely negative thought, and two less negatively valenced thoughts. Thus, participants may have rated their thoughts very differently in regard to valence, potentially leading to lower reliability.
3. Just as in Study 2, thought valence may have been a less reliable measure since participants were asked to list their three *most* negative thoughts.
4. Participants in the dominant hand writing condition did not differ significantly in perceived relationship quality (M = 5.99, SD = .13) relative to participants in the non-dominant handwriting condition (M = 6.11, SD = .13), t(99) = -.65, p > .250).

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